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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,868	04/19/2005	Peter Bassler	270410US0PCT	5986

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EXAMINER	
OH, TAYLOR V	

ART UNIT	PAPER NUMBER
1625	

NOTIFICATION DATE	DELIVERY MODE
09/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/531,868	BASSLER ET AL.	
	Examiner	Art Unit	
	Taylor Victor Oh	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-19* is/are pending in the application.

4a) Of the above claim(s) *19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The Status of Claims :

Claims 8-19 are pending.

Claims 8-18 are rejected.

Claim 19 are withdrawn from consideration.

DETAILED ACTION

1. Claims 8-18 are under consideration in this Office Action.

Priority

2. It is noted that this application is a 371of PCT/EP03/11735 (10/23/03), which has a foreign document, Germany 102493790 (10/23/02).

Drawings

3. The drawings filed on 4/19/05 are accepted by the examiner.

Election/Restrictions

Applicant's election with traverse of Group I (claims 8-18) on 8/30/07 is acknowledged.

Claim 19 (Group II) is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the nonelected group II, there being no allowable generic or linking claim.

Applicants argue in the followings:

1. The burden is on the Examiner to provide reasons and/or examples to support any conclusion in regard to patentable distinction (MPEP 803); furthermore, the apparatus described in claim 19 includes a C-3 splitter which separates the propene from propane; this is not shown in the example recited by the Examiner; therefore, there is no adequate reasons and/ or examples to support a conclusion of lack of unity of the invention.

In response to applicants' argument, there is clear evidence for lack of unity of the invention to be found in another prior art, Marcinkowsky et al (US 4,174,353). In Marcinkowsky et al, it expressly describes the process for separating ethylene or propylene from a purified, multi-component gas stream by using an apparatus comprising a reactor, one absorption and desorption unit and a C_3 splitter. From this prior art, it shows that the same kind of the apparatus as Group II in the claimed invention can be used to produce the materially different product, such as ethylene or propylene obtained from the separation process from a purified, multi-component gas stream. Thus, Group II is not the special technical feature required in the process for the continuous recirculation of the propene which has not been reacted in the oxidation of propene by means of hydroperoxide to give propene oxide. There is no single general inventive concept and no unity of invention for the method or the process as defined in 37 CFR 1.475.

Therefore, there is no single general inventive concept and no unity of invention

between the process for the continuous recirculation of the propene for producing propene oxide and apparatus for carrying a process for the continuous recirculation of the propene, comprising at least one reactor, at least one absorption and the desorption unit and a C_3 splitter as defined in 37 CFR 1.475.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-9, and 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, the term " a hydrocarbon" is recited. The expression is vague and indefinite because the specification does not elaborate what is meant by the term " hydrocarbon". The term "hydrocarbon" may mean that a compound consisting of carbon and hydrogen, but there are numerous hydrocarbons known in the organic chemistry ; there is uncertainty as to what kind of "hydrocarbon" can be applied for the process. Therefore, an appropriate correction is required.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (US 5,599,955) in view of Aldrich (page 1560, 1998).

Vora et al discloses the process of producing propylene oxide in the following example(see from col. 12, line 40 to col. 13, line 30) :

> A technical grade propylene stream withdrawn from an olefin production zone of the present invention will comprise propylene in a concentration ranging from about 98 to about 99 mol-% with about 0.05% ethane and the balance consisting essentially of propane. According to the process of the present invention as shown in FIG. 1, a 100 kmole propylene stream is passed to an epoxidation zone and is therein contacted with about a 20% aqueous hydrogen peroxide solution over a titania-supported titanosilicate catalyst at a temperature ranging from about 40°–60° C. and a molar ratio of propylene: hydrogen peroxide of about 1:1. In the epoxidation zone, approximately 95% of the propylene is converted to produce propylene oxide. The hydrogen peroxide is about 95% efficient in the overall conversion to the oxide producing about 93.5 kmole of propylene oxide, a dilute water phase, and a gas purge stream. The overall material balance for the major components is shown in the following table.
>
> The gas purge, containing about 77 mol-% propylene is dried in an adsorbent filled dryer and returned to the separation zone of the olefin production zone wherein the dry gas purge is admixed with demethanizer bottoms prior to introducing the demethanizer bottoms to the deethanizer. The deethanizer removes ethane and lighter material to produce a C_3^+ stream which is passed to a C_3 splitter to produce a technical grade propylene stream comprising about 98.5 mol-% propylene. The technical grade propylene stream is subsequently returned to the epoxidation zone. At least a

Furthermore, the prior art teaches that examples of diluents for the process are argon ,nitrogen, paraffinic hydrocarbons, and mixtures thereof (see col. 5 ,lines 49-53) and the epoxidation process can be effectively carried out at temperature ranges of between 0 to 100^0 C (see col. 8 ,lines 32-33) at a pressure less than about 3.5 Mpa (see col. 8, lines 46-48).

The instant invention, however, differs from the prior art in that the claimed hydrocarbon is tetradecane used for the process.

Aldrich discloses one of the well-known paraffinic hydrocarbons such as tetradecane solvent (see page 1560).

Vora et al expressly teaches the process of producing propylene oxide by the epoxidation process in the presence of diluents, such as nitrogen and paraffinic hydrocarbons; furthermore, Aldrich discloses the useful tetradecane solvent (see page 1560) as the paraffinic hydrocarbon. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to select the useful tetradecane solvent from the Aldrich chemical handbook by routine experimentations in order to optimize the reaction process. This is because the skilled artisan in the art would expect such a manipulation to be feasible and successful as guidance of selecting the paraffinic hydrocarbon for the diluent shown in the Vora et al (see col. 5 ,lines 49-53).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Taylor Victor Oh, MSD,LAC
Primary Examiner
Art Unit: 1625 9/12/07